THE INDIANA

FARMER & GARDENER.

Vol. I. **INDIANAPOLIS, MAY 31, 1845.** **No. 10.**

PUBLISHED BY

S. V. B. NOEL & CO.

TERMS.—The FARMER AND GARDENER is published *semi-monthly*, each number containing 16 royal octavo pages, at *One Dollar* per annum per copy; *Seventy-five Cents* per copy for Four and less than Ten copies; and *Fifty Cents* per copy for Ten or more copies to the same Post Office. All subscriptions IN ADVANCE.

INDIANA FARMER & GARDENER.

Indianapolis, Saturday, May 31, 1845.

COLMAN'S EUROPEAN AGRICULTURE.—PART III.—We have received this number, which is principally filled with interesting matter relating to agricultural schools and education, a subject of great importance, and to which the public mind in Great Britain is much more awakened than in the United States. We believe the day to be near when every college and academy will have an agricultural department. We have prepared a continuation of our review of Colman, but the press of other matter has crowded it out.

COURTESY.—The Cincinnati Gazette says:

"The venerable widow of Alexander Hamilton visited the General Assembly of New York on Monday. She was invited to take a seat on the floor, and when she went out the whole body rose from their seats."

Would it not have been better for some of them to have got off from their seats when she came in? They might, at least, have offered the Lady a stool, intead of inviting her to to take a seat on the *floor*.

FIRE BLIGHT.—This terrible pestilence of the orchard has again made its appearance. In an article upon the subject which was generally published through the agricultural papers, we expressed the opinion that the foundation of this disorder was always laid in *autumnal* freezes of trees in full growth. But the last fall was not unfavorable. Our trees ripened leaf and wood before they were frozen. Yet the blight has appeared. We are obliged to suppose that we circumscribed the cause as to *time*, and that we should have said, that violent congelation of *sap in motion*, and sudden thawing, whether in autumn, winter, or spring, will result in blight. We have in this number, given two articles upon the subject.

WHITE WATER VALLEY CANAL.—Boats are expected to run from Brookville to Connersville during this month arrangements are making for a celebration of the event.

THE MIAMI CANAL will be completed to its junction with the Wabash and Erie canal early this spring, making the third canal traversing the country from the Ohio river to the Lakes viz: 1. The canal from Alleghanytown to Erie, Pa. 2. The Ohio canal from Portsmouth to Cleveland. 3. The Miami Canal from Cincinnati to Toledo.

AN AGRICULTURAL CONVENTION will be held at Columbus, Ohio, on June 25th and 26th, to discuss the several agricultural propositions brought before the last Legislature; the establishment of a permanent State Board of Agriculture; the encouragement of county societies; the survey of the State; and for the purpose of collecting agricultural statistics, and protecting the interests of agriculture. We regard such conventions, if properly conducted, as eminently useful, being calculated to excite a more general interest in thorough farming, to diffuse information, and to promote the intelligence of the farming community.

CROPS.—In this portion of the State the prospect for crops is yet excellent, although there is much complaint of the wheat; yet we do not think it to be general, and if rust does not strike it, or the fly attack it, there will be a fair crop. We have given, on our last page, numerous extracts from papers in different sections of the Union, exhibiting the state of the crops.

HEMP AGENCY.—Some experiments have recently been made at Louisville by Lewis Sanders, agent of the United States for the Kentucky hemp agency, for the purpose of testing the quality of hemp. Until within a few years Russia hemp was exclusively used in our navy, and was superior to all others. But such has been the success of American cultivators, that our home sta-

ple not only equals but surpasses the far-famed Riga Rein hemp. Mr. Sanders says:

I caused four parcels of hemp to be accurately weighed for twenty-five pounds each, and delivered to Mr. Till, a rope maker of this place, (who learned his trade in Boston,) with directions to make up each parcel separate, into 1¾ inch rope, and into yarns.

No. 1. 25 pounds American water-rotted hemp, sent from the navy yard, Boston.

No. 2. 25 pounds Riga Rein hemp, sent from the navy yard, Boston.

No. 3. 25 pounds cured and prepared by James Anderson of this place, intended for naval purposes.

No. 4. 25 pounds of a good lot of Kentucky dew-rotted hemp.

The waste and tow returned by Mr. Till from No. 1, was 11 pounds; from No. 2, 6¼ pounds; from No 3, 6 pounds; from No. 4, 10 pounds.

A piece of Bot-rope, intended for 1¾ inch, made of yarns running 29, was put to the test,

No. 1 broke or parted at		2705 lbs.
Same of No. 2	"	2556 "
Same of No. 3	"	2940 "
of No. 4 of 16-10 inch parted at		2415 "

Three thread spun yarn of No. 1, broke at 400 lbs; No. 2, at 365 lbs; of No. 3 (hard twisted) at 362 lbs; of No. 4, at 450 lbs.

Marling, two thread, No. 1, broke at 132 lbs; No. 2, at 135 lbs; No. 3, (hard twisted) at 112 lbs; No. 4, at 155 lbs.

One thread yarns, running 26, No. 1, broke at 222 lbs.; No. 2, at 108 lbs; No. 3, at 140 lbs.; No. 4, at 190 lbs.

Other trials will be made and the results published. Hemp has been extensively grown in this neighborhood for four years past, but has been given up this season as unprofitable. We shall say something on this subject at another time. The Cincinnati Gazette says:

Mr. Clay has recently sent thirty eight bales of hemp to New York, for sale. In his note to the commission house in New Orleans to which it is consigned, thence to be forwarded to New York, he says:—"Some of the bales are wholly covered with bagging, some partially so, and the residue uncovered, but all of it well packed and corded with rope. I have sent it in these different modes in order to ascertain which is the best form to ship it in."

The result of his experiment will, of course, be made known for the benefit of those engaged in the culture of hemp, when ascertained.

To Correspondents.

The Louisville Journal in copying from our ninth number an article on Floriculture credits it to Colman's Tour. It was, however, an extract from *Hovey's Horticultural Magazine*, and was inserted by way of illustration, among the extracts which we gave from Colman. The mistake is not material except that it may run the rounds of papers under a wrong credit. Will the Journal send us the Dollar Farmer? It has never come to to our office.

D. Embree and G. Mendenhall's communications will appear in our next. We hope to hear from Mr. E. in respect to his success in the potatoe crop. From our remembrance of the soil of his farm we should anticipate a large yield, if the summer proves cool and wet.

Enquiries.—In visiting our farmers we find that every one has some fact which he cannot explain, some difficulty, some matter on which he needs information. Now these are just the questions which we should be pleased to have sent to us. Either the editor or some correspondent will give such enquiries a satisfactory answer. This is the way to make practical paper, and such we mean the Farmer and Gardener to be.

Dr. Plummer has sent us specimens of the *labels* for fruit trees, &c., such as were described on page 140 of the Indiana Farmer and Gardener. They are very neat and we think the best we have ever seen for common use. We have received from the same source specimens of peas kept in botles for seed as described on the same page as above.—We shall try the process next winter.

Blight, Insects.

In an article on employing suckers of fruit trees for stocks, which we shall copy, Dr. Kirtland says:

"The practice of grafting and budding pears upon this quality of stocks has extended a diseased action, a kind of canker among our pear orchards that has in some instances been mistaken for *blight*, a disease that has its origin in the depredations of a minute coleoptorous insect which has been satisfactorily described in all its stages of transformation by Dr. Harris and other Massachusetts Entymologists."

That the fire blight is, to any considerable extent anywhere, but especially at the west, occasioned by an insect, is an idea, we believe, totally unsupported by facts. That some injury has been done by the *scolytus pyri* the investigations of Mr. Lowell, and Professor Peck leave no room to doubt. But we are not satisfied that, even in these cases, they were the cause of the *blight*, but only an accidental concomitant. Did Mr. Lowell or Professor Peck *always* find this beetle upon blighted trees? Was it found in *every* blighted limb? Did not blight occur without these insects? Has any one of New England *since* found the blight to proceed from the gnawings of this beetle?

Has any one found this beetle *before* the

blight occurred, at its mischevious work; or is it only *after* the blight is seen that the beetle is found! If the *colytus pyri* has been *found* only after the tree is thoroughly affected, there is reason to suppose that it did not *come* until after the disease had prepared the way for it.

We are seriously sceptical of this alleged cause. Whatever may be true of the blight at the east, the blight in Indiana is unquestionably not an effect of the *scolytus pyri*. We have examined with the utmost pains, multitudes of trees in all soils; several of our shrewdest nurserymen have searched, year by year, and we have, unfortunately, had too much opportunity and too many subjects, and yet, no insect or insect track has been detected, except those which have attacked the tree in *consequence* of the blight.

To be sure, we can find bugs, black, brown, green, and grey, but the mere presence of an insect is nothing; though with many, it seems enough, when a tree is blighted, if a bug is found on it to determine the parentage of the mischief. Nor do the published accounts of insects, found on blighted trees, increase our respect for this theory. The observations seem to have been not thorough enough, and not carefully made, and the reasonings even less philosophical. Men have searched for a theory rather than for the mere facts in the case. But by far the greatest number of those who write, give no evidence of relying upon any observations which they have themselves made, but go back perpetually to the old precedents—Mr. Lowell and Professor Peck—without being at any pains to verify them. Has Dr. Kirtland ever found the *scolytus pyri?* Has he ever, in time of extensive blight, found it under such circumstances as to satisfy his mind that it was the real cause of fire blight? or does he rest satisfied that blight is occasioned by an insect simply because so it is set down in good books?. The admirable articles from his pen, copied into our seventh and ninth numbers, contain many facts and principles which lie near to what we suppose to be the cause of all this spreading mischief, viz: the effect of soil and cultivation on the structure of the tree, rendering it an easy prey to fall, winter and spring frosts. The canker may be mistaken for blight by those who have not been acquainted with either; but surely, no one who has ever attentively examined one real case of fire blight would ever mistake it for anything else, or anything else for it.

Vegetable Miracles.

Scions of the "Sweet and Sour" Apple.—We received from Mr. Wm. T. Hamilton, Clifton Park, N. Y., a parcel of scions from a tree which produces this kind of apple. The same gentleman also sent us samples from the same tree, last fall. which were tested by many, and the strange peculiarity acknowledged by all. Mr. H. states that forty years ago, two scions were brought to that place from Horse-Neck. The theory of the origin of the variety, which is only *traditional*, as we understand, is that which has been often given, of a union of two scions of opposite kinds. "For several years," (says Mr. H.) "the fruit from these scions was almost entirely sweet; then a small spot on one side, of greener color, and sour as a greening, showed itself. The tree is still living and *now bears greenings only*. It has some years produced twenty bushels, though they are less sour, and more pleasant than the ordinary greenings. The tree from which those I gave you were taken, produces greenings also, and the two varieties are found growing side by side, on the same twig."—*Alb. Cult.*

We have no doubt about the character of the fruit, but the tradition of its origin is a little too patristic for our protestant reason. When a traveller was relating, in Cowper's presence, some prodigious marvels, the poet smiled somewhat incredulously. "Well sir, don't you believe me? I saw it with my own eyes." "Oh, certainly, I believe it if *you* saw it, but I would not if I had seen it *myself*." Even so we feel about the thousand and one physiological fooleries which run the monthly rounds of the papers.

How on earth do men suppose a fruit to receive its characteristic quality? Is it from the root, trunk, pith, bark, branch, or leaf? One would think that it made no difference which. We have long supposed that the leaf digested the sap, returned it to the passages of distribution to be employed in the formation of fruit, wood, tissue, &c. Is this the function of the leaf? or have recent in-

vestigations exploded this doctrine? If not, it will be apparent that all grafting of scions together, cannot change the quality of fruit, unless the leaves are also amalgamated. If a red, green, yellow, and white fruit, sweet, sour, or bitter, be put upon the same tree, each will maintain its characteristics; because, each bud or scion has its own peculiar leaves, from whose laboratory the fruit is sweetened or acidulated and colored with all its hues. To be sure, fruits are affected by the stock on which they are put; but their characteristic elements are not altered, but only pushed along in the same line and made more perfect.

There is no doubt that trees indulge, occasionally, in rare antics. A sober apple tree will sometimes let down its dignity, in what gardeners call a "sport", e. g.: a sweet apple may grow on a sour tree, and vice versa. An apple may on one side be sweet and on the other sour. But, in such cases, the same general law is seen governing yet. We all know that great changes of temperament occur in men. A nervous temperament often becomes abdominal, and a little, wiry, fussy, peevish, minikin, becomes a round, plump, rosy, corpulent spot of good nature. Similar changes may occur, through disease, or the peculiarity of the season, or from unknown causes, in the structure of the leaves of a branch, and then the fruit will follow the change of the leaf.

But the fruit itself digests still further the elaborated sap sent to it from the leaf. If, then, from any hidden causes, the fruit should in part, change its structure, the juices elaborated would be altered. If stamens and pistils may change to petals, if petals may change to leaves, if leaves may extend to branches, we know of no reason why the whole or the half of a fruit may not, also, alter its structure; and with its peculiarity of function, also, of course, the character of the fruit. While then we are not sceptical of "monsters," "marvels," "sports," "singularities," we think we can trace the original law through all the transmutations. But prodigies that contradict every ascertained vegetable law, we are very apt to contradict too. But we dare say that Dr. Plummer, in his innumerable inquisitive rambles, and researches, has collected many curious facts, and to him we turn the matter over.

Briars, Elders, and Blackberries.

Can any one give us some more *infallible* remedies for these pests of the field? We give some extracts, although we doubt their permanent efficacy.

"A subscriber of ours in Fayette county, informs us that he finds sure success in killing these pests, by taking a hoe or club, and breaking or bruising them down, while in full flower.

"A writer in the Prairie Farmer says, cut all weeds you wish to kill, off at the point of junction between the roots and tops, which vegetable physiologists term the neck of plants.

"It is also stated that if vegetables are broken or cut off at that point, they as surely die as when an animal has his head cut off. This is probably the secret of success in the experience of our subscriber. Bruising with a hoe or club, has the effect of breaking them off at the point of junction, when if a sharp instrument were used, they would likely be cut off at some other point."—*West. Cult.*

We give an extract from the Western Farmer and Gardener on the same subject.

"I observe that a correspondent in your last number enquires how the blackberry bush may be destroyed. As I have encountered and eradicated some formidable patches, which existed on the lands which I have at different times added to my farm, I think I may venture to recommend to your correspondent an infallible prescription Some time in the winter or spring cut them close to the ground, and repeat the operation the last of July. A few will appear the second year, be sure to cut them also the last of May, and the last of July. This *specific* is based upon the scientific principle, *that no tree, shrub, or plant, can long maintain the life of the root without the aid of the top.* The leaves &c. are as indispensable to the long life of a vegetable, as lungs are to an animal.

"The same plan will destroy the iron-weed or devil-bit, which so much infests the blue-grass pastures of Kentucky, and which some farmers have vainly endeavored to eradicate by cutting once a year for thirty years in succession. Such pests are not to be exterminated by cutting in the blossom *or in the moon*, but by the dint of scratched hands and sweated faces."

Not long since we were asked how to eradicate such pests from a farm, and gave directions like the above. The gentleman replied, that he had thoroughly tried such

methods in vain. He had broken up the sod, cultivated the field in corn, torn out every root that appeared, and kept the field clean for two years in succession; but no sooner was it laid down to grass, than up came again the elders and briars. Has any reader had better luck? If so, let him give others the benefit of his experience.

By far the greater number of plants have buds only on the stem, or on the crown—i. e. the part where the stem and roots unite. In all such plants, if the leaves be utterly destroyed a few times in a season, the roots must die—for the root is just as dependent for its support on the leaf, as the leaf is on the root. But in plants whose roots possess what are termed adventitious buds, after the stem and crown are both destroyed, the root will yield new plants. Every one knows this to be true of the locust, and of cherries, plums, &c., The extirpation of plants whose roots are prolific of buds is extremely difficult. Can Mr. Hooper give any help?

Insect Blight.

I find, Mr. Editor, an enquiry in the Cincinnati Farmer and Gardener: [There is no such paper; there is a *Western* Farmer and Gardener published *at* Cincinnati.—Ed. Ia. Farm. and Gard.] whether any one has ever noticed the blight of the pear on trees grown upon quince stocks? and if not, how can they account for the insect theory? The inquiry appears easy of reply in the mind of almost every one who has observed the blight. It is rarely that a tree of firm, tight growth if affected, and the pear, grown upon the stock of the quince, it is well known is of more firm texture than when grown upon its own. The insect, it is true is said, occasionally, to be found in the limbs of an old tree where the wood is firm, but it is very rarely, and in the mind of the writer, what upon large limbs of old trees is sometimes taken for insect blight, is a different disease, whether of canker or something else, I am not yet fully satisfied. That every species of blight is produced from the insect I do not say, but that there is an insect which penetrates and poisons the wood I believe; that cases of blight are produced from other causes I think not unfrequently happens; and the cultivator looking for the insect neglects the care required to secure the tree from total destruction. The editor of the Farmer and Gardener, I think, leans somewhat to the belief of blight being produced from electricity, and the question he asks in regard to insect theory, can, perhaps, be returned to him in relation to the electric.

Yours. S.

We insert the above from our correspondent, and, so soon as we can find leisure, intend giving this subject a thorough investigation. The whole matter appears so little understood that every theory advanced has obtained some believers. We have also heard of a tree that some years since, it is said, showed evident signs of blight, when the owner of the ground, in gathering stones from his land, placed a large pile of them around this tree, concluding it of no further value: the tree we learn has since recovered its vigor and is now in a flourishing condition; he judges this to be the manner to protect the tree, and that there is no insect; but the cause, from some other source, prevented by keeping the earth moist about the roots. We have no doubt that keeping the earth about the roots moist, by placing stones or litter, is beneficial, but we are not yet prepared to think it will prevent the evil, and what to say of the iron system we know not, it goes however to aid the electric theory.—*W. R. Mag. Hort.*

The worst cases of blight which we have seen this spring were in pears grafted on quince. Yet, without doubt, there is a less danger of blight in such cases, for reasons which will appear in the sequel. The insect-theory we regard as wholly untenable except for special, local, peculiar ravages which are not properly *blights*. The blight is a disease of the *circulation*. It affects every tissue of the plant. It is not disease from exhaustion of sap by the suction of aphides, as Dr. Mosher of Cincinnati supposed, for the trees have a plethora rather than scarcity of sap; it lacerates the sap vessels, bursts the bark, flows down the branches, and dries in globules upon the trunk. On cutting the tree, if the blight is yet new, the texture of the alburnum will be found to resemble what is called a *watercore* in the apple, its color is of a dirty greenish hue, soon changing by exposure to brown and black. But if the blight is old, the wood is of a dingy white, the alburnum colored like iron rust, and the bark of a brownish black. These appearances are incompatible with any idea of exhaustion by the gnawing of the *scolytus pyri*, or the suction of aphides, which would result in mere shrinking of parts, dryness, and death. If insects have

a hand in the mischief, it is by the secretion of poison—of which fact, we have never seen the trace of proof, although it has often been suggested, and is, by some, empyrically asserted. To our minds the insect-poison-theory is imaginary. It is entirely convenient to refer every excresence, or shrinking of parts, every watery suffusion, wart, discoloration, crumpling leaf, wilting &c., to poison, and still more convenient to find the insect so atomic that it cannot *be* found, and thus to heap the multiform sins of the orchard on the scape goat of a hypothetical insect.

As to electricity, as no one knows anything about this elemental sprite, his outgoings or incomings, we are like to have acted over again all the caprices of witch-times, when elves and gnomes cut up every prank imaginable, and when any prank which was cut up, of course, was performed by them. Every body is agog about electricity. But we respectfully suggest that it is one thing to ascertain facts by cautious, guarded experiments, or careful observation, and quite another, to set down everything, which one does not know what else to do with, to electricity, simply because, *it may be so for aught that we know to the contrary.* People reason somewhat in this wise: electricity performs a vast number of very mysterious operations; therefore, every operation which is mysterious is performed by electricity. We believe electricity to have something to do with it, only because it seems to have concern with every living, growing thing.

We believe that the blight is, in all cases, the effect of frost upon the sap. We have, until recently, supposed it to arise from autumnal freezing while the tree is in full growth. We are now inclined to suppose that severe freezing and sudden thawing at any time, autumn, winter or spring, *when the sap is in motion*, will result in blight. The blight of 1844 was from the freezing of growing trees in the autumn of 1843, and the premonitory stages were clearly discernible in the tree during the whole winter, months before it broke out in its last, malignant form.

When a warm winter allows continuous motion of sap, and sudden, severe freezing with rapid thawing occur, we *suppose* it to cause a variety of blight. We are making investigations on this head, but are not yet prepared to speak with certainty.

When a sudden violent freezing overtakes growing trees in spring, with rapid thaws, it, we suppose, results in a blight resembling the autumn-caused blight

We are diligently searching into this whole matter, and hope to throw some light upon it.

But now comes *the* question. What is it that makes some trees so obnoxious to this evil while others escape? Why are some orchards generally affected, and contiguous orchards entirely saved?

It is very plain that the blight occurs, as a general disease, in some seasons more than in others, because it depends upon the peculiar condition of the season—the time and degree, of frosts. But it does not seem so clear why, when these conditions are favorable to blight, one tree should suffer, and the next in the row, should not; why one orchard should be depopulated, and another in the same town not touched.

We think that light will be afforded on this point by a consideration of the *texture* of trees.

When trees are rapidly grown, by stimulating manures, or upon strong clay loams, or from any other cause, the wood is coarse, the passages enlarged, the tissue loose and spongy. The tree passes a great volume of sap,—it is but imperfectly elaborated (as is seen by the late period to which such trees defer the bearing of fruit) and the tissues formed by it are correspondingly imperfect, in wholesomeness, compactness, and solidity of parts. The tree is bloated—is dropsical.

On gravelly soils, or loams with a gravelly subsoil, or on any kind of soil which gives a slow and thorough growth, the wood is fine, close, and perfect; the vessels are not expanded; their sides are firmer, less sensitive to sudden changes of temperature; and when exposed to them, better able to resist them.

Whatever soil produces rank or coarse wood, a flabby tissue will be subject to blights. Whatever soil induces a fine grain-

ed, compact fibre, and vigorous tissue will be free from blight. The same is true of the various methods of cultivation; those who drive their trees, who aim chiefly at a rapid and strong growth, will give their trees a condition requisite for blight. Those who pursue a more cautious, a slower method, and look to the *quality* rather than the *quantity* of their wood, will be comparatively free from blight.

To be sure there may be seasons so extreme that blight will occur in the most healthy tree; so disease will occur in the most temperate men; yet temperance—a conformity to the laws of nature, is the rule of health, and nonconformity the preparation for disease. We shall resume this subject in a future number, to give some facts which we are collecting, and defer what more we have to say till then.

Meanwhile, will those who are unfortunate enough to have a good opportunity for observing, examine,

1. The soil and subsoil of blighted trees?

2. The habit of the tree, as to rankness of growth?

3. The character of the cultivation which has been employed?

4. In short, the relative condition of orchards, and trees, which have escaped or been blighted, as to fineness and closeness and health of texture. It is high time that this matter should be minutely investigated. It is the *opprobrium cultorum.*

Spring Wheat.

There are few farmers who plant spring wheat, not as many as there were a few years ago. It is not popular with millers, being of a very hard kernal, and not turning out so good flour. A farmer from Madison county tells me that he always puts in a crop of spring wheat to make sure against any mishap which may occur to the winter wheat. In one case he raised twenty-three bushels upon three-fourths of an acre, sowing about a bushel of seed to the acre. In preparing spring wheat for mill, *he wet it with two quarts of water to the bushel,* and wheat so treated yielded as good flour as any other, and was as easy to grind. We should be glad of the experience of any subscriber, with spring wheat.

Alas!

Troublous times have always been thought prolific of great minds. Genius, like lightning, seems to require storms and darkness for its brightest exhibitions. We have another exemplification of this fact in the editor of the Crawfordsville People's Press, who, after the disastrous frost of May 7, thus bewails himself:

"REQUIEM TO BEANS.

'Twas on a clear and starry night—
The seventh night of May—
There came a chilling frost that swept
The crop of BEANS away!
Although the stocks were warmly wrapped
In blankets half a score,
The blossoms hang their drooping heads
In night caps formed of hoar—
A sad calamity which all
Who love boiled beans deplore!"

Cherries without Stones.

The Parisian scientific correspondent of the New York "Courier des Etats Unis" mentions a new discovery of a way to produce cherries without stones. Early in the spring, before the sap is in full flow, a young bearing tree is divided in two down to the branching off of the roots, the pith carefully removed with a wooden spatula, the parts again united, the air being excluded by an application of potter's clay the whole length of the opening, and bound together by woolen cord. The sap soon re-unites the severed parts, and in two years the tree will produce cherries of the finest kind, and having in the centre, instead of the usual kernal, a thin soft pellicle.

We should suspect the illustrious originator of this rare device to possess a *head* "of the finest kind, and having in the centre, instead of the usual brains, a thin, soft, pellicle"—and *very* soft at that.—*Ed. Ia. Farm. and Gard.*

To prevent Birds and Squirrels destroying Corn.—Soak the seed half a day or so, previous to planting, in a moderately strong solution of saltpetre and copperas, and dry it with ashes, plaster, or lime sprinkled over it. This preparation will effectually guard the seed from birds and squirrels, and give the corn blade, after germinating, a rapid start.—*American Agriculturist.*

ORIGINAL CORRESPONDENCE.

Grasses.

We wrote to Dr. Plummer for some information on certain grasses, the seed of which, imported from England, had been presented to us. We extract a part of his letter in reply.—*Ed.*

To the Editor of the Indiana Farmer and Gardener.

RICHMOND, 5th mo. 1st, 1845.

Esteemed Friend:— * * * *. Respecting the grasses: I repeatedly sent to Cincinnati to an English importer, for the dáctylis, anthroxánthum, and alopecùrus, &c., and at last secured the orchard grass and one pound of lucerne. I will gladly accept the proffered seeds, excepting the orchard grass, of which I have sown several bushels this spring, and the pòa praténsis, called *English grass*; but it is far the most common grass all over *our* county, under the name of spear grass, green sward, blue grass, (the eastern blue grass is *P. compréssa*,) meadow-grass, &c. &c. I will take particular pleasure in returning other seeds, if I should happen to have any desired kinds in my possession. I have planted about thirty grains of upland rice received from Ellsworth; and, from present appearances, I shall have some seed to distribute next season. I can command some Havana tobacco plants; but I have, at the same time, no wish to encourage their cultivation; men are sufficiently foul-mouthed without them.

On the grasses named, I remark cursorily:

Anthroxánthum odoràtum. In some parts of the United States this grass has spread to a considerable extent; in the west it is rarely seen. When it was introduced from Europe, I am not now able to say. In some parts of Pennsylvania, where it is naturalized, it is found commonly in meadows and woodland borders. It does not require a very rich, or, at least, a very deep soil; and is not esteemed highly as a fodder-grass; its chief excellence lies in its fragrance, which is due to the fragrance of benzoic acid. The aim of the farmer should therefore be, to mix it with other grasses, in order that the hay may be properly scented. It attains the hight* of eighteen or twenty inches, has a rather slender culm; roots perennial.

Alopecùrus praténsis. The name "meadow *fox-tail*" given to this grass, sometimes startles the American farmer when it is recommended to him as valuable for his fields; confounding it, as he does, with those fox-tails (setária glauca and setária viridis) which carry a portion of that mischief with them which those fox-tails did that Sampson fastened together. It is probable that this grass, as perhaps most others do, succeeds better in England, than it will here, on account of the habitually damp atmosphere of the British Isles. It is said to make a good permanent pasture in a moist soil. It is also cultivated for hay. It should be pastured closely, like some other kinds, to prevent it from eradicating the more tender species with which it may be sown.

Dáctylis glomeràta. The orchard grass, called also dog's-foot, and cock's-foot, grows to the height of three and four feet in a good soil, and is peculiarly adapted to shaded lands. An anecdote, in this connection, may not be inappropriate. In 1828 I sowed some orchard-grass seed among half a dozen fruit trees just set out on my town lot about twenty feet apart; but, in a few years, the spear-grass took total possession of the ground, and retained it until 1843, when the trees had intermingled their branches over the grass; it then faded, and began to disappear; and behold! in its place, the orchard-grass, the early and legitimate occupant, peeps up and flourishes. Is it not, then, a grass truly entitled to the shade? The seed is very light: one specimen weighed only twelve pounds a bushel; another bushel, of a different purchase, reached fourteen pounds. One to two bushels per aker,* is the quantity recommended. It does not vegetate as readily as some other cultivated grass seeds; and to prevent a tufty growth, experienced graziers say the grass ought to be early and closely pastured. The disposition to form tussucks* is very strong, and is generally raised as an objection to the cultivation of the grass. I have, however, seen that a smooth surface may be attained by proper management.

Cynosùrus cristàtus. This grass has hardly been tested in the United States as yet. I know nothing of its virtues.

Festùca ovìna, is found in Michigan, much of whose soil, (dry sandy) is well suited to this grass. It is said to be an excellent, early grass; succulent, with very narrow, rough leaves; and, I think, English authorities cite it as the favorite food of sheep: hence, perhaps, the name ovìna. Of the co-species,

Festùca praténsis, I know of but two localities—Frederick, Maryland, and some parts of Pennsylvania; where, without cultivation, it has spread, not unwelcomely, into the choice meadows and pastures.

Lólium perénne. Botanists have found this grass in several of the New England States, in Pennsylvania, and in Maryland—perhaps elsewhere. It makes a handsome

* Webster.

* Webster.

carpet for a lawn; but, I believe, American experiments cannot corroborate the English testimony in its favor as a pasture or meadow grass, except as a proper constituent in a general mixture of grasses.

Pòa praténsis is almost a universal grass, assuming, like many other plants, various appearances, according to soil, &c. It is the luxuriant, dark-colored, Kentucky blue-grass; and a short, stunted, pale, green-sward, in a poor, tenacious clay. It forms a compact pasture sod, much relished by cattle: necessity, only, would induce the American farmer to cultivate it for hay. Some consider it the *best* of all pasture grasses. The seed is sold in the remotest New England States, as "just imported from the west, the famous Kentucky blue-grass seed;" and in the west, as the "smooth-stalked meadow grass, recently arrived, a small quantity, from Old England."

Pòa trivialis. Well named: beside the Pòa praténsis it is indeed trivial: hardly deserves attention. It, however, bears a wetter soil than the praténsis.

Trifòlium incarnàtum. Seed of this species of clover was introduced into the United States first, I think, in 1833. Our latitude appears to have been too cold for it.

J. T. P.

Remarks.—Would orchard grass be better for dense shade than blue grass? A gentleman applied to us for information, saying that he has a grove of sugar maple, on a rich sandy loam, which he has endeavored for sometime past to lay down to grass, but without success. He thinks the shade too great for blue grass, can Dr. P. give any information?

For the Indiana Farmer and Gardener.

Cucumbers.--Yellow Bug.

I have always been successful in protecting my cucumbers from the striped bug, by making little balls of clay, dipping them in spirits of turpentine, and setting one in every hill; (though by the way my "hills" are always hollows, or at least plains;) or more expeditiously by dropping a little of the essential oil among the plants. In the latter case, care must be taken, not to let any of the oil come into contact with the young cucumbers, as they will be inevitably destroyed by it. So long as the odor of the turpentine is perceptible, the plants are secure from insect depredation. When the quantity of the spirits of turpentine used, has been too small, and the hot weather has dissipated it, I have once or twice dipped the balls the second time. I have often thought of planting temporarily, a bunch of mint or pennyroyal in the midst of my cucumber beds, as a substitute for the oil of turpentine; but have never executed the task; perhaps some one will be curious enough to act on the suggestion, and report.

J. T. P.

Remarks.—The remedy for the yellow bug is worthy of attention; it is easy, and, if a sure preventive, will save a great deal of trouble. Our climate is, it would seem, peculiarly favorable to the breeding of pernicious insects. We have known a large patch of cucumbers to be destroyed in a single day, while the plants were yet small, by the prodigious quantity of bugs which suddenly swarmed upon them. A gentleman informs us that he has always saved his vines by planting *poppies* among them. Those on one side of an alley, without poppies, would be entirely eaten, while those on the other side, with poppies, would not be touched.—*Ed. Indiana Far. and Gard.*

Seed Peas.

For the Indiana Farmer and Gardener.

Dear Sir:—I saw a number of suggestions in your paper with regard to the best method of preserving seed peas from the ravages of the bug. Plant your peas designed for seed after the 5th of June, or as late as the season will permit them to ripen, and the product will not be troubled with the bug. Will some of your readers try this simple experiment and report the results for your paper next year?

Yours very truly. H. P. B.

Remarks.—This method will probably succeed in very cold seasons, and in more northern latitudes, where the pea-bug is not so abundant. But we have tried the experiment for several summers in our garden and find our late peas as much infested as any other. On the contrary, a *very* early crop has usually escaped. We should be pleased, however, to hear the experiments of others.

Ed. Indiana Far. and Gard.

For the Indiana Farmer and Gardener.

Native ornamental Shrubs, Trees, etc.

On looking over the catalogues of Parsons &c., Long Island; Manning, Massachusetts; Ernst, Cincinnati, and some others, I find the following plants, which are *natives* of Wayne county, Ia. Indeed, all of those here enumerated, may be found within a few miles of Richmond.

Acer rùbrum, or *Scarlet flowering Maple;*

" eriocarpum, *Silver-leaved Maple;*
" Saccharinum, *Sugar Tree;**
" negúndo, *Ash-leaved Maple;*
Oesculus flava, *Yellow Horse Chestnut;*
Asclépias tuberòsa, *Orange-colored Swallowwort;*
Corylus americànus, *American Hazlenut;*
Cércis canadénsis, *Judas' Tree;*
Córnus flórida, *White-flowering Dogwood;*
Cephalánthus occidentàlis, *Swamp Globe Flower;*
Clématis virginiana, *Virgin's Bower;*
Cássia marilándica, *Maryland Senna;*
Chelòne glábra, *White Chelone;*
Dírca palústris, *Leatherwood;*
Fráxinus americàna, *White Amer. Ash;*
Fágus sylvática, *Beech;*
Geránium maculatum, *Spotted Cranesbill;*
Gledítschia triacánthos, *Honey Locust;*
Gymnocladus canadénsis, *Kentucky Coffee;*
Heliánthus altissímus, *Tall perennial Sunflower;*
Juníperus virginiana, *Red Cedar;*
Laùrus benzòin, *Spicewood;*
Sássafras, *Sassafras;*
Lobèlia cardinàlis, *Cardinal Flower;*
" syphilítica, *Blue Lobelia;*
Liriodéndron tulipífera, *Tulip Tree;*
Monarda dídyma, *Scarlet Monarda;*
Menispérmum canadénse, *Canada Moonseed;*
Platanus occidentàlis, *Sycamore;*
Pópulus nìgra, *Black Poplar;*
" trépida, *American Aspen;*
Porcèlia glábra, *Smooth Pawpaw;*
Potentílla fruticòsa, *Shrubby Cinquefoil;*
Ptèlea trifoliata, *Trefoil Tree;*
Penstèmon pubéscens, *Hairy Penstemon;*
Phlóx divaricata, *Early Blue Phlox;*
" maculàta, *Spotted* "
" paniculàta, *White Panicled Phlox;*
Polemònium réptans, *Jacob's Ladder;*
Pulmonària virgínica, *Lungwort;*
Quércus álba, *White Oak;*
" rùbra, *Red* "
" nìgra (very rare) *Black Oak;*
Spìrea lobata, *Red Siberian Spina;*
" opulifòlia, *Guilder Rose;*
Staphylèa trifoliàta, *Bladdernut;*
Tília pubéscens, *Basswood;*
Tradescántia virgínica, *Spiderwort;*
Tríllium eréctum, *Erect trillium;*
Ulmus americàna, *Weeping Elm;*
" fúlva, *Red Elm;*
Zanthoxyllum fraxíneum, *Thorny Ash.*

Beside these, which are sold by eastern and western cultivators at 25 to 50 cents each, I might enumerate many species indigenous to our soil, more worthy of being reclaimed from the woods and swamps than many of the foregoing. J. T. P.

* A nurseryman from the east, last fall, took from this neighborhood, hundreds of seedlings of this valuable tree, which are there sold at fifty cents a tree.

For the Indiana Farmer and Gardener.

Winters in Wayne County, Indiana.

The haste in which I despatched the articles published in No. 9, of this paper, led me into the omission of the temperature of last winter. I well remember leaving a blank, to be filled with the proper numerals, when I should find time to sum up the daily observations and to ascertain the average. I shall now endeavor to make up the deficiency; and will add the result of other observations for several years past; by which the accuracy of the "oldest inhabitants," and those who have "never known" such a winter, may be brought to a thermometric test. The register is kept for *noon* only; and the average temperature given is therefore medium heat. I reject fractions of a degree.

1837–8.

Average temp. of 12th mo.	43°	warmest noon 66°	coldest 21°
" " 1st mo.	39	" " 59	" 26
" " 2d mo.	34	" " 48	" 24
Av. for whole wint'r	39 nearly.	58	24

12th month 22d, early in the morning the mercury stood at 12°. On same month, 24th hour, early in the morning, the mercury stood at 11°.

The rains of this month, raised our branch of Whitewater, on the 17th, to a very unusual hight; and we had good sleighing in the second month; the snow on the 16th being twelve inches deep: an extraordinary depth for this region.

1838–9.

Average temp. of 12th mo.	35°	warmest noon 57°	coldest 14°
" " 1st mo	39	" " 62	" 28
" " 2d mo.	44	" " 68	" 22
Averages	39	62	21

The beginning of this winter was so dry, that many wells were exhausted, and had to be deepened for the first time.

1839–40.

Average temp. of 12th mo.	32°	warmest noon 43°	coldest 18°
" " 1st mo.	27	" " 46	" 6
" " 2d mo.	48	" " 68	" 30
Averages	36	52	18

This was also a very dry winter; the bottom of wells being laid bare; and some deepened for water two feet and more.

1840–1.

Average temp. of 12th mo.	33°	warmest noon 52°	coldest 14°
" " 1st mo.	31	" " 48	" 0
" " 2d mo.	34	" " 55	" 5
Average	33	52	6

During the 12th mo., the mercury stood, at 7 and 8 o'clock A. M. on several days, at 4°, 10°, and 12°; and rather more than three inches of water fell, in the form of snow and

rain. In 1st month the mercury sank to zero two or three times, at 7 o'clock A. M.; and about 3¼ inches of rain fell, (snow melted always included.) 2d month, mercury 6 o'clock A. M., once or twice at zero and one degree below. Rain 1 1-6 inch.

1841–2.

Average temp. of 12th mo.	37°	warmest noon 60°	coldest 22°
" " 1st mo.	40	" " 61	" 18
" " 2d mo.	40	" " 62	" 10
Averages	39	61	17

Rain in 12th month, upwards of 4 8-10 inches; during 1st month 1¼ inches, and during 2d month, nearly 4 inches: on the 8th of this month the mercury stood at 20, at 7 o'clock A. M.

1842–3.

Average temp. of 12th mo.	35°	warmest noon 58°	coldest 11°
" " 1st mo.	40	" " 64	" 10
" " 2d mo.	26	" " 53	" 8
Averages	34	58	10

A warm south wind raised the thermometer to 60 at 1 o'clock A. M. of the 8th of 12th month; but the wind veering to west soon afterward, the mercury fell to 26°: on the 23d, at 8 o'clock A. M., the thermometer indicated 4° below zero. Rain, during the same month, more than 2¼ inches; during the 1st month, 3 1-5 inches; and the 2d month 3¼ inches. Snow on the 8th of 1st month, 9 inches deep. The mercury in the 2d month several times passed below zero, from 1° to 10° at 5 and 7 o'clock A. M.; and hail on the 13th, fell to the depth of 4¼ inches! For a time, wagon-loads could have been gathered off the ground.

1843–4.

Average temp. of 12th mo.	38°	warmest noon 56°	coldest 26°
" " 1st mo.	30	" " 50	" 10
" " 2d mo.	39	" " 58	" 21
Averages	36	55	19

Rain 12th mo. 2¼ inch.
" 1st mo. 2½ "
" 2d mo. 1½ "

On the 29th, at 8 o'clock A. M., mercury at 2° below zero.

1844–5.

Average temp. of 12th mo.	39°	warmest noon 56°	coldest 14
" " 1st mo.	41	" " 58	" 30
" " 2d mo.	45	" " 69	" 16
Averages	42	61	20

12th mo. rain 1¾ inches; mercury one morning at 6°.
1st mo. rain 2 inches nearly.
2nd mo. rain 2¼ inches; mercury one morning at 4°; generally from 12° to 24°, at 7 o'clock A. M.

J. T. P.

Work corn in this manner:—First harrow with a good implement; then plow first up then down between the rows; then use the expanding cultivator, with shovel teeth.—*West. Farm. & Gard.*

From the Boston Cultivator.

Seeds Growing in Squashes.

Messrs. Editors:—Accompanying this letter, you will find a package containing the inside of a winter squash which has been kept through the winter in a room where a family has lived. It has been frozen some two or three times in course of the winter. Last evening the lady of the house took down the squash in order to cook it, when, upon cutting it open, the inside was found to be what I have enclosed to you. The seeds had sprouted, and grown from one to three inches long, and on many of the sprouts green leaves were formed, some with the seed sticking to the leaves, the same as when just breaking through the ground after being planted in the spring, the other end of the sprout being formed with a thick cluster of small roots, like a plant growing in the earth in summer season. And, what is more remarkable, the squash was as sound as when harvested last fall. The size of it was about fourteen or sixteen inches long and six inches in diameter; raised by Mr. John Boyden of this town, and kept in his room till last evening, when, after cutting it open, it was brought into my store, where a number of the neighbors, with myself, examined it, and it was proposed by many present, to have the curiosity (if it is one) sent to the office of the Boston Cultivator; and if you think it entitled to a place in your columns, you can make such disposition of it as you may think proper. I send you the sprouts as they grew inside, so that you may see and judge for yourself. Perhaps it may be some dried up before you receive it.

Respectfully yours,
ROLAND PARKS.

Russell, March 1845.

The freezing and thawing produced decomposition, in some measure, in the inner part of the squash, and this part served as a soil for the seeds, which being moist and warm vegetated. Though seeds be kept warm and moist, they will not generally vegetate in the matter in which they grow, until decomposition takes place in that matter, to afford food for the tender plant. This is a wise provision of nature, as, otherwise, many seeds would be lost. Sometimes cucumbers lay for months in the liquor in which they grew, in the hot sun, and yet they do not vegetate. We have taken out the seeds, and the liquor and mucilage in which they grew, and kept them several weeks in a state of fermentation and in a warm place, in order that they might be easily cleaned, and yet they did not grow in this condition, in heat and moisture.—*Bost. Cult.*

Last year (1844) we were shown, by John H. Wright of this place, seeds of the *seven*

year pumpkin exactly like the above. It is true that, usually, seeds do not germinate until decomposition takes place in the substance where they have grown; but it was not the case in the specimens shewn to us. The pumpkin was sound, the flesh coarse and fibrous, but *not* at all decomposed. A large part of the crop raised by Aaron Alldredge of this place were similarly affected. The fact that the leaves were nearly green, although enclosed in a substance not even translucent, much less transparent, is worthy of notice. Our hypothesis for the sprouting of seed is, that, in wet seasons, and in coarse-grained pumpkins, the sap is not elaborated, and is conveyed to the seed differing very little from simple water. The conditions for germination are present, viz: moisture, heat, and darkness, (for a seed tends more rapidly to part with its fixed carbon in darkness than in light.)—*Ed. Indiana Far. and Gard.*

From the Albany Cultivator.

Analysation of Kentucky Soil.

Tired fields soon recover when in Grass—Rotation of Crops.—I analysed many specimens of Kentucky soil last spring. They were taken from land worth about fifty dollars per acre, in Clarke county, fourteen miles east of Lexington. I will send you three specimens.

Number 1, was taken from land that produced, the fall previous, one hundred and forty-one bushels of shelled corn to the acre. This field has been in cultivation about fifty years, and has twice been in clover, each time two years. The last time it was in clover I had hauled upon it about fifty (one-horse) cart loads of rotten chips mixed with spent ashes, to the acre, from the place where most of the wood for family fires had been chopped for the last fifty years. The ash-hopper stood near, and after the potash was extracted, the spent ashes were thrown with the chips.

Number 2, has been cultivated about the same length of time; has been once in clover, and once in blue grass and clover; five years altogether in grass; had cattle fed all winter upon it whilst in grass; produced about one hundred bushels of shelled corn to the acre.

Both fields were planted with large corn, three feet nine inches by three feet six inches apart in the hills, and were thinned to four stalks in a hill. The season was uncommonly favorable to the production of corn.

Number 3, was clay, taken from a hole three feet below the surface.

	No 1.	No. 2.	No. 3.
Soluble, vegetable, and other matter	7	6	0
Insoluble vegetable matter	12	12	0
Alumina	17	6	24
Magnesian lime	21	25	26
Phosphate of lime	3	2¼	3
Iron (red oxide, shot ore, gravel)	7	4	12
Quartz, flint, and sand very small fragments	30	41	33
Loss	3	3¼	2
	100	100	100

Magnesia constitutes about one-fifth of the lime, and the clay has in it eight per cent. of potash. It is a general impression here that there is no sand in our soil, and to find one-third sand is truly astonishing. I could not believe it at first, and added potash to some of it, and with a blow-pipe made glass. I took, subsequently, two hundred and twenty-nine parts of the sand that had resisted nitric, sulphuric, and muriatic acids, and melted it with potash, and afterwards found that one hundred parts of it was iron, lime, and magnesia, so there is not as much sand as my tables show.*

It is truly astonishing how soon our old fields, when worn down by long continued and excessive cropping, regain their primitive fertility when sown in grass. The above analysis shows that all they want is vegetable matter. And even on hill sides, where all the soil is washed off, so as to expose the clay, as soon as there is added vegetable matter, it becomes productive again, and the above analysis of clay shows that it has all the elements of fertility except vegetable matter.

My most productive field (number one) did not produce more than thirty bushels of corn to the acre eleven years ago, when I first got possession of it. It has been improved mostly by clover and hauling manure upon it. Number two was likewise exhausted so that it would not have produced more than thirty bushels of corn to the acre. It has been improved by clover, bluegrass, and feeding stock upon it, so that they deposited their manure in the field where it was wanted.

To restore an exhausted, or rather tired field, it should be sown in grass, and stock fed upon it during the winter months. Hogs fattened upon tired land enrich it very much. It may be true that they fatten faster in a

* This experiment was made from sand after it had resisted the above acids. The lime, magnesia, and iron, in this last experiment, were about in the same proportion as in the others. This reduces the sand to a less average than twenty per cent., and a part of this was incombustible vegetable matter.

close pen, but when they are fed on ground that is intended for cultivation they will greatly increase its productiveness. One hundred hogs fattened upon ten acres of worn land will increase the product of that land in the next corn crop at least two hundred bushels. This being the case, how very wasteful to fatten hogs in a little pen by the side of the creek, branch, or pond, where all the manure is washed into the water and is wasted. I do not speak of those who scrape up their manure and haul it upon their fields. Such do not live about here. Very few of our Kentucky farmers have as yet engaged in hauling out manure. And why should they, when, by a proper rotation of crops and feeding upon the fields whilst in grass, they may make their manure so much easier in the fields where they want it?

When a field is much exhausted it should be kept in grass four or five years. In this case there should be sowed three quarts of clover seed, the same quantity of timothy (*phléum praténse*) seed, and half a bushel (in the chaff) of blue grass seed to the acre. If the field is not much exhausted, two years will be a sufficient time in grass, and the blue grass seed may be omitted. The grass may either be fed off to stock or mowed. If the latter, the hay may be fed with other food on the same ground to stock cattle. The soil will improve much faster where stock are fattened than where they are only fed so as to winter them. The ground is enriched in proportion to the richness of the food that is fed thereon.

When the grass is plowed up, two crops of hemp may be taken, a crop of corn, oats fed down to hogs, corn again, wheat or rye followed by grass sown upon it in the spring. Thus in an eight year course, giving two crops of hemp, two of corn, one of oats, one of wheat or rye, and two of grass. Land will improve under this course if stock are fattened upon it the two winters it is in grass.

Another shorter rotation is two crops of corn, rye fed down by hogs, grass seed sown upon the rye in the spring after it is sown, grass two years with stock fed or fattened on it during winter. Land will also improve under this course, and the second crop of corn will be better than the first, in years equally good. In the first case also the second crop of hemp will be better than the first. The soil will be rotted the second year, and there will be much less labor in cultivating the ground in corn.

I could never get grass to come well when sowed with oats, if I put on a sufficient quantity of oats to insure a good crop. Wheat is often injured by the early start of the grass in the spring, producing the rust in it. Therefore I prefer putting in my grass seed with the rye crop. I have had clover come very well, however, when I would only put in a small quantity (half a bushel) of oats to the acre.

SAM'L D. MARTIN.

COLBYVILLE, KY., January, 1845.

Clean Culture.

It is a fact, that ground, which is kept from vegetation of any kind, will not dry up so much as that on which a crop is grown. There are many who doubt this, but if they would make a proper examination, their doubts will be removed. Make an experiment—take a piece of ground in the garden, and hoe it over every day, or often enough to keep all kinds of vegetation from starting. Sow another piece adjoining with grass, or some kind of grain. After a drought of two or three weeks, examine both pieces by digging into them with a spade or shovel. The earth of the grass or grain plat will be found dry, like ashes, to the depth of a foot or more. The other will be dried in only two or three inches—below that, it will be found moist. Examine the ground in an orchard, in a dry time; it will be found dry to a great depth. If there is a tree in your cornfield, see if the ground is not much dryer near it, than on similar ground away from the reach of its roots. The fact is, the roots of vegetation bring up the moisture from a greater depth below the surface, than it could be done by simple evaporation. This may be known by noticing how much more moisture is required to support a crop of corn, when the stalks are nearly full grown, than in its earliest stages.

Now, from all this we deduce an argument in favor of clean culture,—that is, a culture which admits no useless vegetation to grow among cultivated crops,—The advantage of which would be to give the crop the whole benefit of the moisture, and other nutriment of the soil, instead of giving a portion to worthless weeds.

In a dry time, we frequently hear farmers say,—"It will not do to work my corn or potatoes; they need all the grass and weeds to keep the ground from drying up." Now this, as we have shown, is all a mistake,—the grass and weeds make the ground dry faster and deeper.

But it has been alleged, that corn has been injured by plowing or working it when the weather was very dry. We admit that this effect may have followed under particular circumstances. That is to say, if corn gets too large before it is worked, injury may be done. The reason is, that the roots have become extended, and the plow cuts off so large a portion of them, that the remain-

der cannot supply the stalk, and it soon withers. This is the way the "*fired*" corn, sometimes spoken of at the South and West, is generally produced.—*Alb. Cult.*

What are Flowers good for?

"I have said and written a great deal to my countrymen about the cultivation of flowers, ornamental gardening, and rural embellishments; and I would read them a homily on the subject every day of every remaining year of my life, if I thought it would induce them to make this a matter of particular attention and care. When a man asks me, what is the use of shrubs and flowers, my first impulse is always, *to look under his hat and see the length of his ears.* I am heartily sick of measuring everything by a standard of mere utility and profit; and as heartily do I pity the man, who can see no good in life but in the pecuniary gain, or in the mere animal indulgences of eating and drinking."

Colman's Agricultural Tour.

We protest against the sauciness of the italicised line. Mr. Colman never feels any such impulse; and if he does, he ought to suspect his own ears. Nothing is more preposterous than interflagellations among men on the matter of likes and dislikes. Every man selects *his* ruling passion, and scoffs at such as do not enthusaize with him. A market gardener rails at a florist for fol-de-rol trifles; and the florist looks at the length of the fellows ears who has nothing but turneps, onions, and cabbages; while a big Miami farmer, who puts in his five-hundred-acre corn-patch, by way of summer amusement, regards both as small affairs. We find no fault with any body for their super-ardent enthusiasm for flowers; but when they throw it in other people's faces, and call them brutes and asses, for not liking pretty flowers, we think the thing has been carried quite far enough. We love good manners *along* with pretty flowers.

Ed. Indiana Far. and Gard.

Preservation of Animal Food.

The discussion by the Farmer's Club, at its last meeting, upon the preservation of animal food, we find, upon referring to the minutes, was of quite an interesting character. A valuable receit by a Virginia lady, for curing hams, was presented by Mr. Eastman. After salting the hams, she caused them (without being smoked) to be hung in the garret for two years—never cut them until they had hung that length of time—and he had never tasted finer hams in his life than these.

A Friend stated that contractors in the British service never rubbed in the salt, but always diluted it in water until the brine would float a potato—that the pork and beef cured in that way was found to keep well in all climates, and for a long time. They always added to the brine some saltpetre.—They used the mineral salts. The meats became certainly very salt.

Mr. Ross thought that the salt principally used in England was mineral salt, known to us as Liverpool. Mr. Serrell stated that it was ocean salt, and not mineral. The Onondaga salt was stated to contain thirteen per cent. of the phosphate of lime.

Professor Mapes said, as to the purification of salt, that may be readily effected by re-crystalization. Salt can thus be rendered perfectly pure, and the crystals will acquire size in proportion to the slowness of cooling, the largest crystals being the product of the greater length of time in cooling. Confectioners in making rock candy, place the syrup in a warm place, and cause it to cool very slowly. The crystals are then large. The same syrup cooled more quickly, presents the small crystals which you see in loaf sugar. A number of methods for preserving meat have been recently invented. One of the best is, to fill a tight tank with meat and pickle, then adjust the covering, which must be air-tight, then pump out the brine, and a vacuum is formed. The fibrous arrangement of the meat opening all its infinitessimal pores, and the pickle penetrates them. Pressure has been tried, but I doubt the utility or necessity of it. Animal heat must be got rid of, for decay sometimes commences before it has left the meat. The meat, being placed in a vacuum, parts rapidly with its animal heat, and, by means of double valves, each piece of meat may be introduced and taken out with no more loss of vacuum than the portion occupied by the space between the valves containing the piece of meat put in or taken out, so that the process goes on with little loss.

Mr. Hornby, of this city, has used jerked beef made of the muscular parts of cattle, cut by a machine into very small slices, as thin as tissue paper, across the fibre—then pressing into the form of a brick. This meat is as tender as the tenderloin steak. Cooks pound a steak to make it more tender.

Mr. Paulding—I rise for the purpose of asking whether the solution of two pounds of guano in one gallon of water, for the purpose of steeping seeds, as recommended by Dr. Gardner, in the American Agriculturist for April, will destroy the seeds, for pure

guano is known to be capable of destroying plants. I applied a mixture of a table-spoon full of Peruvian guano to a quart of water, to some choice roses—the next day every leaf dropped off, and they have not yet recovered from it. I am opposed to the application of guano to roses.

We have been saved the trouble of asking such questions. We were a little afraid, on first reading Dr. Gardener's direction, to follow the prescription exactly, and made a much weaker solution of guano than two pounds to the gallon would be, in which we soaked corn, radish, beet, and cabbage seed, with the very marked effect of killing them all. On the other hand we have used a much stronger solution than a table-spoonful to a quart of water, upon roses, geraniums, lemons, &c., with decided benefit.—The geranium became very thrifty, short jointed, strong in its wood, and superabundant in flowers. But nothing seemed to relish this fertilizing wonder so much as the *Calla Ethiopica*. It has for the past two months thrown out six or eight splendid buds, and seems in no wise inclined to rest yet from its floral labors.—*Ed. Ia. Farm. & Gard.*

Ledru-Rollin,

The advocate of the elevation of the laboring classes at the Chamber of Deputies (France,) lately presented a petition signed by *forty-one thousand signatures* for an inquest into the condition of the laboring classes and the situation of labor. This petition struck the centre or ministerial party with surprise. M. Ledru-Rollin announced that this was but a preliminary presentation, and that he should lay upon the table of the Chambers petitions with three times that number of names. The signatures to the present petition were collected mainly in three places—Lyons, Nantes, and Toulouse.

The question of the organization and labor and the elevation of the laboring classes is occupying the attention of the best minds in France, and must ere long become a capital question in French politics. It is one of the highest interest, as it leads directly to the discussion of principles of the political and social organization of a much higher order than any that now occupy the attention of the legislative bodies or the governments of any civilized natien.—*Tribune.*

A great fortune with a wife is a bed full of brambles.

Scours in Sheep.

This is one of the worst complaints that attack the flock. As soon as discovered, the diseased animals should be removed from the flock and kept fasting at least twenty-four hours without any food. Then commence by feeding them, in small quantities, ripe hay; coarse timothy is as good as any; keep them up on ripe hay until you are satisfied the disease has abated. This is the most simple and surest method I ever tried.

Fresh feed, grass or hay, may cause this complaint, and when thoroughly commenced among the flock, it may spread by contagion, therefore a shift of place and feed is obviously necessary.

If the hay be brined once or twice each week, through the foddering season, say dissolve one pint of salt in three gallons of water, for a flock of fifty, it will prevent the scours, and is one of the best methods of winter management, if fed in mild weather, that can be recommended for sheep.

Albany Cult.

Geese on the Farm.

It is contended, in England, that cattle and horses remain healthy, if geese are permitted to feed in the pasture. The geese are said to destroy poisonous plants, and hence when stock become sickly, English farmers turn their geese amongst them.

We are well aware that geese are poison to most kinds of grass, and it is our opinion that four geese will destroy as much grass as a cow. Geese and turkeys cost the farmer more than any living creatures on the place in proportion to their value. A turkey sells at from twenty-five to fifty cents, and consumes as much food as a hog that weighs an hundred pounds.—*Tenn. Agriculturist.*

To Sweeten Rancid Butter.

The *Echo du Monde Savant* says:—"An agriculturist in the neighborhood of Brussels, having succeeded in removing the bad smell and disagreeable taste from butter by beating, or mixing in fresh water with chloride of lime, he was encouraged by this happy result to continue his experiments, by trying them on butter so rancid as to be past use; and he has restored to butter, whose odor and taste were insupportable, all the sweetness of fresh. This operation is extremely simple, and practicable to all; it consists in beating the butter in a sufficient quantity of water, in which put twenty-five to thirty drops of chloride of lime to two pounds of butter. After having mixed it till all its parts are in contact with the water, it may be left in it for an hour or two, afterwards withdrawn, and washed anew in

fresh water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having verified the experiment, it was found that twenty-five or thirty drops to a kilogramme of butter were sufficient.

Suspension Hives.

A writer in the Farmer's Cabinet suspends his beehives by fixing two uprights on his hives, and boring a hole in each, inserts a wooden pin; by this cross-piece he hangs his hives under a sort of roof, to protect them from the sun. He says the worms drop out, and the bees fight the moths better. He makes his addition to his hives, by splicing on underneath, a box of the same size as his hives; bees working downward, and seldom upward.

The Crops.

WHEAT CROP.—The Westminster (Md.) Carrolltonion says:—"The whole crop in this county generally presents a remarkably fine appearance; and if there is no unfavorable weather the crop will be very heavy.

The rye crop, on the average, is not good, although it has improved considerably since the late rains."

THE FROST—PEACHES.—We are informed that the peach trees in this vicinity were not as much injured by the late frost as was supposed. It is believed they are not totally injured: there will be about half a crop. Delaware has about two thousand acres devoted to peach trees. Her crop last year was about one hundred thousand bushels. The fruit was very fine, and averaged less than fifty cents a bushel.—*Wilmington (Del.) Journ.*

THE CROPS.—The Germantown (Pa.) Telegraph says: The grain looks well in all directions, and should ordinarily favorable weather continue for the ensuing month or six weeks, a heavy crop of wheat and rye may be anticipated. The grass, also, which has of late years become an important crop within twenty or thirty miles of Philadelphia, looks extremely flourishing, and promises to turn out well. A stalk of rye, which grew upon the farm of Mr. Jonathan Barrington, in Bristol township, and left at this office, was plucked in head on the 16th ult.

CROPS IN SOUTHERN VIRGINIA.—Extract of a letter from a Southside county.

"The season has been most unpropitious for the tiller of the soil. The drought has prevailed in all this region with intense severity for full six weeks. In addition to this, which has exerted a very injurious influence on all the growing crops, we have had the most destructive frost, which has occurred within the memory of the oldest inhabitant. All fruits and many of the fruit trees have been killed—and the forests bear the aspect they do in the dead of winter. Garden vegetables of all kinds, not excepting peas, which were deemed proof against frost, have been destroyed or greatly injured. But the most serious disaster is that which has befallen the wheat crop. All the May wheat—and the culture of that species has become quite general—has been frosted, so as to destroy full half of that portion of the crop. Some fields, I have seen, look yellow, as though harvest was at hand. I fear our people are but little able to bear this great calamity. To conclude this list of disasters, for three weeks all the storms in the universe seem to have broken loose—for I never knew so much, such long continued, and such violent winds. The consequence has been extensive and destructive fires."

Richmond Whig, May 7.

THE DROUGHT,—which has annoyed us in this region for weeks, seems to be general in the State. In Madison, as we learn from the Miscellany, no rain, of any consequence has fallen in four weeks. With the exception of one or two very slight showers our deprivation has been longer. Before our paper goes to press we hope to experience a thunder storm.

Many of our planters are a month behind their prospects of last year at this period.—*Savannah Georgian.*

CONTINUED DROUGHT.—The Greenville (S. C.) Mountaineer of the 25th ultimo says: Another week has passed without sufficient rain to lay the dust. The wheat and oat crops are very much injured, and in some fields entirely cut off; the corn and cotton seed that has been planted, in many places, cannot come up. The drought seems to extend throughout the whole United States, with the exception of light and partial showers in some sections.

THE WHEAT CROP looks favorable: all that is now feared is dry weather.—*Chicago Dem., April 23.*

WHEAT IN MICHIGAN.—The Michigan Farmer says the wheat crop has not been injured by exposure to frosts the past winter. It anticipates a good crop.

WHEAT CROP.—During a short excursion into the country a few days since, we were much gratified to see the wheat crops look so fine. Should the blighting rust not again visit it before its maturity, there will be an abundance, and to spare, raised the present year, for home consumption.—*Lexing (Ky.) Inq.*

CROPS.—The Paris (Missouri) Mercury of the 19th ult. says:

Never have we seen here so gloomy a prospect for an abundant crop. There has not been rain enough to lay the dust for months. Seed which has been put in the ground cannot vegetate, unless it should rain. Wheat is dry to its roots. We hear complaints relative to tobacco plants to pitch a crop, and fears are entertained on this subject. We would advise farmers to sow tobacco seed again, although late in the season. If tobacco seed be soaked in new milk for a few days, and then sown, they will come up in a short time and grow with astonishing rapidity.

THE WEATHER EASTWARD.—The Boston Journal says there was a heavy frost in that vicinity on May 8, and it is feared that some of the fruit trees, just putting forth their blossoms, have received serious injury.

The passengers in the Charter Oak, which left Bangor on the same day, state that they had a severe snow storm coming down the river, and that several inches of snow had fallen before they left the Penobscot. Snow also fell at Portland, where the storm was of considerable duration.

CROPS.—A very intelligent friend from the Western Reserve sends to us the following notice of crops:

I have passed through the State, having just arrived here from Cleveland, and furnish you the following particulars in reference to the growing crops.

The wheat in the country north of Columbus has suffered very much on the clay land from dry weather. That portion which was not well put in did not take root, and was killed by the drought. With these exceptions the wheat in the whole northern part of the State looks well. The pears are healthy and forward, and doing well. From Columbus south, the wheat, with rare exceptions, looks fine and promises an abundant harvest.

The grass spring crops are suffering very much for want of rain, and a much longer continuation of this dry weather will do the spring crops irreparable injury. The straws are unusually low for the season of the year.

The late heavy frosts have destroyed nearly all the fruit o fevery kind. I fear we shall have to eat this year *pumpkin pies* and go without *apple dumplings*.

MAPLE SUGAR.—The Montpelier Watchman estimates the value of the sugar crop of Vermont, the present year, at $1,000,000.